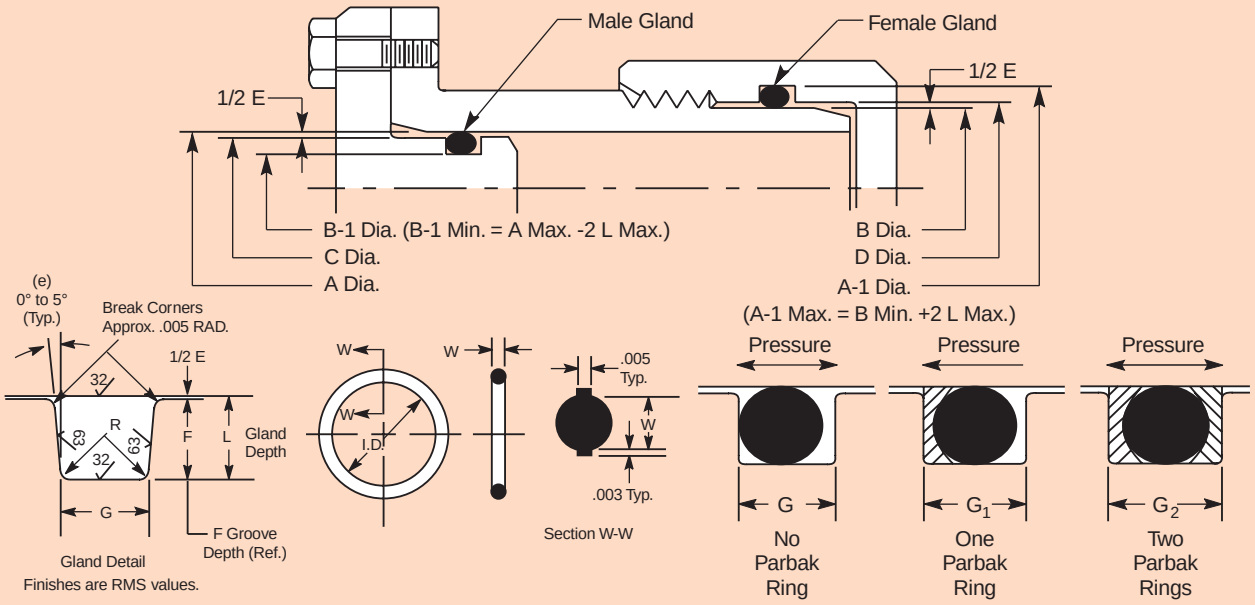
Guide for Design Table 4-2

If Desired Dimension is Known for	Select Closest Dimension in Column	Read Horizontally in Column	To Determine Dimension for
Bore Dia. male gland	A	B-1 C G	Groove Dia. (male gland) Plug Dia. (male gland) Groove width
Plug Dia. male gland	C	A B-1 G	Bore Dia. (male gland) Groove (male gland) Groove width
Tube OD female gland	B	A-1 D G	Groove Dia. (female gland) Throat Dia. (female gland) Groove width
Throat Dia. female gland	D	A-1 B G	Groove Dia. (female gland) Tube OD (female gland) Groove width

Design Guide 4-2: Guide for Design Table 4-2

Industrial Static Seal Glands



Refer to Design Chart 4-2 (below) and Design Table 4-2 for dimensions

metric conversion 32√ = .8√

Industrial O-Ring Static Seal Glands

O-Ring 2-Size AS568B-	W Cross-Section Nominal	W Cross-Section Actual	L Gland Depth	Squeeze Actual	Squeeze %	E(a) Diametral Clearance	G - Groove Width: No Parbak Ring (G)	G - Groove Width: One Parbak Ring (G_1)	G - Groove Width: Two Parbak Ring (G_2)	R Groove Radius	Max. Eccentricity (b)
004 through 050	1/16	.070 ±.003 (1.78 mm)	.050 to .052	.015 to .023	22 to 32	.002 to .005	.093 to .098	.138 to .143	.205 to .210	.005 to .015	.002
102 through 178	3/32	.103 ±.003 (2.62 mm)	.081 to .083	.017 to .025	17 to 24	.002 to .005	.140 to .145	.171 to .176	.238 to .243	.005 to .015	.002
201 through 284	1/8	.139 ±.004 (3.53 mm)	.111 to .113	.022 to .032	16 to 23	.003 to .006	.187 to .192	.208 to .213	.275 to .280	.010 to .025	.003
309 through 395	3/16	.210 ±.005 (5.33 mm)	.170 to .173	.032 to .045	15 to 21	.003 to .006	.281 to .286	.311 to .316	.410 to .415	.020 to .035	.004
425 through 475	1/4	.275 ±.006 (6.99 mm)	.226 to .229	.040 to .055	15 to 20	.004 to .007	.375 to .380	.408 to .413	.538 to .543	.020 to .035	.005

(a) Clearance (extrusion gap) must be held to a minimum consistent with design requirements for temperature range variation.
(b) Total indicator reading between groove and adjacent bearing surface.
(c) Reduce maximum diametral clearance 50% when using silicone or fluorosilicone O-rings.
(d) For ease of assembly, when Parbaks are used, gland depth may be increased up to 5%.

Design Chart 4-2: For Industrial O-Ring Static Seal Glands

Gland Dimensions for Industrial O-Ring Static Seals, 103.5 Bar (1500 psi) Max.†

O-Ring Size Parker No. 2-	Dimensions ID	±	W	Mean OD (Ref)	A Bore Dia. (Male Gland) +.002 -.000	A-1 Groove Dia. (Female Gland) -.000	+	B Tube OD (Female Gland) +.000 -.002	B-1 Groove Dia. (Male Gland) +.000	–		C Plug Dia. (Male Gland) +.000 .001	D Throat Dia. (Female Gland) +.001 -.000	G† Groove Width +.005 -.000
2-001	.029	.004	.040	.109	.105	.101		.040	.044		*	.103	.042	.055
002	.042	.004	.050	.142	.138	.132	.002	.053	.059	.002	*	.136	.055	.070
003	.056	.004	.060	.176	.172	.162		.067	.077		*	.170	.069	.083
004	.070	.005		.210	.206	.181		.081	.106		*	.204	.083	
005	.101	.005		.241	.237	.212		.112	.137		*	.235	.114	
006	.114	.005		.254	.250	.225		.125	.150		*	.248	.127	
007	.145	.005		.285	.281	.256		.156	.181		*	.279	.158	
008	.176	.005		.316	.312	.287		.187	.212		*	.310	.189	
009	.208	.005		.348	.343	.318		.218	.243		*	.341	.220	
010	.239	.005		.379	.375	.350		.250	.275		*	.373	.252	
011	.301	.005		.441	.437	.412		.312	.337		*	.435	.314	
012	.364	.005		.504	.500	.475		.375	.400		*	.498	.377	
013	.426	.005		.566	.562	.537		.437	.462			.560	.439	
014	.489	.005		.629	.625	.600		.500	.525			.623	.502	
015	.551	.007		.691	.687	.662		.562	.587			.685	.564	
016	.614	.009		.754	.750	.725		.625	.650			.748	.627	
017	.676	.009		.816	.812	.787		.687	.712			.810	.689	
018	.739	.009		.879	.875	.850		.750	.775			.873	.752	
019	.801	.009		.941	.937	.912		.812	.837			.935	.814	
020	.864	.009		1.004	1.000	.975		.875	.900			.998	.877	
021	.926	.009		1.066	1.062	1.037		.937	.962			1.060	.939	.093
022	.989	.010	.070	1.129	1.125	1.100	.002	1.000	1.025	.002		1.123	1.002	
023	1.051	.010	±.003	1.191	1.187	1.162		1.062	1.087			1.185	1.064	
024	1.114	.010		1.254	1.250	1.225		1.125	1.150			1.248	1.127	
025	1.176	.011		1.316	1.312	1.287		1.187	1.212			1.310	1.189	
026	1.239	.011		1.379	1.375	1.350		1.250	1.275			1.373	1.252	
027	1.301	.011		1.441	1.437	1.412		1.312	1.337			1.435	1.314	
028	1.364	.013		1.504	1.500	1.475		1.375	1.400			1.498	1.377	
029	1.489	.013		1.629	1.625	1.600		1.500	1.525			1.623	1.502	
030	1.614	.013		1.754	1.750	1.725		1.625	1.650			1.748	1.627	
031	1.739	.015		1.879	1.875	1.850		1.750	1.775			1.873	1.752	
032	1.864	.015		2.004	2.000	1.975		1.875	1.900			1.998	1.877	
033	1.989	.018		2.129	2.125	2.100		2.000	2.025			2.123	2.002	
034	2.114	.018		2.254	2.250	2.225		2.125	2.150			2.248	2.127	
035	2.239	.018		2.379	2.375	2.350		2.250	2.275			2.373	2.252	
036	2.364	.018		2.504	2.500	2.475		2.375	2.400			2.498	2.377	
037	2.489	.018		2.629	2.625	2.600		2.500	2.525			2.623	2.502	
038	2.614	.020		2.754	2.750	2.725		2.625	2.650			2.748	2.627	
039	2.739	.020		2.879	2.875	2.850		2.750	2.775			2.873	2.752	
040	2.864	.020		3.004	3.000	2.975		2.875	2.900			2.998	2.877	
041	2.989	.024		3.129	3.125	3.100		3.000	3.025			3.123	3.002	
042	3.239	.024		3.379	3.375	3.350		3.250	3.275			3.373	3.252	
043	3.489	.024		3.629	3.625	3.600		3.500	3.525			3.623	3.502	

† This groove width does not permit the use of Parbak rings. For pressures above 103.5 Bar (1500 psi), consult Design Chart 4-2 for groove widths where back-up rings must be used.

* These designs require considerable installation stretch. If assembly breakage is incurred, use a compound having higher elongation or use a two-piece piston.

Design Table 4-2: Gland Dimensions for Industrial O-Ring Static Seals, 103.5 Bar (1500 psi) Max.

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Gland Dimensions for Industrial O-Ring Static Seals, 103.5 Bar (1500 psi) Max.† (Continued)

O-Ring Size	Dimensions				A	A-1		B	B-1		C	D	G†
Parker No. 2-	ID	±	W	Mean OD (Ref)	Bore Dia. (Male Gland) +.002 -.000	Groove Dia. (Female Gland) -.000	+	Tube OD (Female Gland) +.000 -.002	Groove Dia. (Male Gland) +.000	–	Plug Dia. (Male Gland) +.000 .001	Throat Dia. (Female Gland) +.001 -.000	Groove Width +.005 -.000
044	3.739	.027		3.879	3.875	3.850		3.750	3.775		3.873	3.752	
045	3.989	.027	.070	4.129	4.125	4.100	.002	4.000	4.025	.002	4.123	4.002	.093
046	4.239	.030	±.003	4.379	4.375	4.350		4.250	4.275		4.373	4.252	
047	4.489	.030		4.629	4.625	4.600		4.500	4.525		4.623	4.502	
048	4.739	.030		4.879	4.875	4.850		4.750	4.775		4.873	4.752	
049	4.989	.037		5.129	5.125	5.100		5.000	5.025		5.123	5.002	
050	5.239	.037		5.379	5.375	5.350		5.250	5.275		5.373	5.252	
102	.049	.005		.255	.247	.224		.062	.085	*	.245	.064	
103	.081	.005		.287	.278	.256		.094	.116	*	.276	.095	
104	.112	.005		.318	.310	.287		.125	.148	*	.308	.127	
105	.143	.005		.349	.342	.318		.156	.180	*	.340	.158	
106	.174	.005		.380	.374	.349		.187	.212	*	.372	.189	
107	.206	.005		.412	.405	.381		.219	.243	*	.403	.221	
108	.237	.005		.443	.437	.412		.250	.275	*	.435	.252	
109	.299	.005		.505	.500	.474		.312	.338	*	.498	.314	
110	.362	.005		.568	.562	.537		.375	.400	*	.560	.377	
111	.424	.005		.630	.625	.599		.437	.463	*	.623	.439	
112	.487	.005		.693	.687	.662		.500	.525	*	.685	.502	
113	.549	.007		.755	.750	.724		.562	.588	*	.748	.564	
114	.612	.009		.818	.812	.787		.625	.650		.810	.627	
115	.674	.009		.880	.875	.849		.687	.713		.873	.689	
116	.737	.009		.943	.937	.912		.750	.775		.935	.752	
117	.799	.010		1.005	1.000	.974		.812	.838		.998	.814	
118	.862	.010		1.068	1.062	1.037		.875	.900		1.060	.877	
119	.924	.010	.103	1.130	1.125	1.099	.002	.937	.963	.002	1.123	.939	.140
120	.987	.010	±.003	1.193	1.187	1.162		1.000	1.025		1.185	1.002	
121	1.049	.010		1.255	1.250	1.224		1.062	1.088		1.248	1.064	
122	1.112	.010		1.318	1.312	1.287		1.125	1.150		1.310	1.127	
123	1.174	.012		1.380	1.375	1.349		1.187	1.213		1.373	1.189	
124	1.237	.012		1.443	1.437	1.412		1.250	1.275		1.435	1.252	
125	1.299	.012		1.505	1.500	1.474		1.312	1.338		1.498	1.314	
126	1.362	.012		1.568	1.562	1.537		1.375	1.400		1.560	1.377	
127	1.424	.012		1.630	1.625	1.599		1.437	1.463		1.623	1.439	
128	1.487	.012		1.693	1.687	1.662		1.500	1.525		1.685	1.502	
129	1.549	.015		1.755	1.750	1.724		1.562	1.588		1.748	1.564	
130	1.612	.015		1.818	1.812	1.787		1.625	1.650		1.810	1.627	
131	1.674	.015		1.880	1.875	1.849		1.687	1.713		1.873	1.689	
132	1.737	.015		1.943	1.937	1.912		1.750	1.775		1.935	1.752	
133	1.799	.015		2.005	2.000	1.974		1.812	1.838		1.998	1.814	
134	1.862	.015		2.068	2.062	2.037		1.875	1.900		2.060	1.877	
135	1.925	.017		2.131	2.125	2.099		1.937	1.963		2.123	1.939	
136	1.987	.017		2.193	2.187	2.162		2.000	2.025		2.185	2.002	
137	2.050	.017		2.256	2.250	2.224		2.062	2.088		2.248	2.064	

† This groove width does not permit the use of Parbak rings. For pressures above 103.5 Bar (1500 psi), consult Design Chart 4-2 for groove widths where back-up rings must be used.

* These designs require considerable installation stretch. If assembly breakage is incurred, use a compound having higher elongation or use a two-piece piston.

Design Table 4-2: Gland Dimensions for Industrial O-Ring Static Seals, 103.5 Bar (1500 psi) Max.

Gland Dimensions for Industrial O-Ring Static Seals, 103.5 Bar (1500 psi) Max.† (Continued)

O-Ring Size	Dimensions				A	A-1		B	B-1			C	D	G†
					Bore Dia. (Male Gland)	Groove Dia. (Female Gland)		Tube OD (Female Gland)	Groove Dia. (Male Gland)			Plug Dia. (Male Gland)	Throat Dia. (Female Gland)	Groove Width
Parker No. 2-	ID	±	W	Mean OD (Ref)	+.002 -.000	-.000	+	+.000 -.002	+.000	–		+.000 .001	+.001 -.000	+.005 -.000
138	2.112	.017		2.318	2.312	2.287		2.125	2.150			2.310	2.127	
139	2.175	.017		2.381	2.375	2.349		2.187	2.213			2.373	2.189	
140	2.237	.017		2.443	2.437	2.412		2.250	2.275			2.435	2.252	
141	2.300	.020		2.506	2.500	2.474		2.312	2.338			2.498	2.315	
142	2.362	.020		2.568	2.562	2.537		2.375	2.400			2.560	2.377	
143	2.425	.020		2.631	2.625	2.599		2.437	2.463			2.623	2.439	
144	2.487	.020		2.693	2.687	2.662		2.500	2.525			2.685	2.502	
145	2.550	.020		2.756	2.750	2.724		2.562	2.588			2.748	2.564	
146	2.612	.020		2.818	2.812	2.787		2.625	2.650			2.810	2.627	
147	2.675	.022		2.881	2.875	2.849		2.687	2.713			2.873	2.689	
148	2.737	.022		2.943	2.937	2.912		2.750	2.775			2.935	2.752	
149	2.800	.022		3.006	3.000	2.974		2.812	2.838			2.998	2.814	
150	2.862	.022		3.068	3.062	3.037		2.875	2.900			3.060	2.877	
151	2.987	.024		3.193	3.187	3.162		3.000	3.025			3.185	3.002	
152	3.237	.024		3.443	3.437	3.412		3.250	3.275			3.435	3.252	
153	3.487	.024		3.693	3.687	3.662		3.500	3.525			3.685	3.502	
154	3.737	.028	.103	3.943	3.937	3.912	.002	3.750	3.775	.002		3.935	3.752	.140
155	3.987	.028	±.003	4.193	4.187	4.162		4.000	4.025			4.185	4.002	
156	4.237	.030		4.443	4.437	4.412		4.250	4.275			4.435	4.252	
157	4.487	.030		4.693	4.687	4.662		4.500	4.525			4.685	4.502	
158	4.737	.030		4.943	4.937	4.912		4.750	4.775			4.935	4.752	
159	4.987	.035		5.193	5.187	5.162		5.000	5.025			5.185	5.002	
160	5.237	.035		5.443	5.437	5.412		5.250	5.275			5.435	5.252	
161	5.487	.035		5.693	5.687	5.662		5.500	5.525			5.685	5.502	
162	5.737	.035		5.943	5.937	5.912		5.750	5.775			5.935	5.752	
163	5.987	.035		6.193	6.187	6.162		6.000	6.025			6.185	6.002	
164	6.237	.040		6.443	6.437	6.412		6.250	6.275			6.435	6.252	
165	6.487	.040		6.693	6.687	6.662		6.500	6.525			6.685	6.502	
166	6.737	.040		6.943	6.937	6.912		6.750	6.775			6.935	6.752	
167	6.987	.040		7.193	7.187	7.162		7.000	7.025			7.185	7.002	
168	7.237	.045		7.443	7.437	7.412		7.250	7.275			7.435	7.252	
169	7.487	.045		7.693	7.687	7.662		7.500	7.525			7.685	7.502	
170	7.737	.045		7.943	7.937	7.912		7.750	7.775			7.935	7.752	
171	7.987	.045		8.193	8.187	8.162		8.000	8.025			8.185	8.002	
172	8.237	.050		8.443	8.437	8.412		8.250	8.275			8.435	8.252	
173	8.487	.050		8.693	8.687	8.662		8.500	8.525			8.685	8.502	
174	8.737	.050		8.943	8.937	8.912		8.750	8.775			8.935	8.752	
175	8.987	.050		9.193	9.187	9.162		9.000	9.025			9.185	9.002	
176	9.237	.055		9.443	9.437	9.412		9.250	9.275			9.435	9.252	
177	9.487	.055		9.693	9.687	9.662		9.500	9.525			9.685	9.502	
178	9.737	.055		9.943	9.937	9.912		9.750	9.775			9.935	9.752	
201	.171	.005	.139	.449	.437	.409		.187	.215		*	.434	.190	
202	.234	.005	±.004	.512	.500	.472	.002	.250	.278	.002	*	.497	.253	.187
203	.296	.005		.574	.562	.534		.312	.340		*	.559	.315	

† This groove width does not permit the use of Parbak rings. For pressures above 103.5 Bar (1500 psi), consult Design Chart 4-2 for groove widths where back-up rings must be used.

* These designs require considerable installation stretch. If assembly breakage is incurred, use a compound having higher elongation or use a two-piece piston.

Design Table 4-2: Gland Dimensions for Industrial O-Ring Static Seals, 103.5 Bar (1500 psi) Max.

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Gland Dimensions for Industrial O-Ring Static Seals, 103.5 Bar (1500 psi) Max.† (Continued)

O-Ring Size	Dimensions				A	A-1		B	B-1		C	D	G†
					Bore Dia. (Male Gland)	Groove Dia. (Female Gland)		Tube OD (Female Gland)	Groove Dia. (Male Gland)		Plug Dia. (Male Gland)	Throat Dia. (Female Gland)	Groove Width
Parker No. 2-	ID	±	W	Mean OD (Ref)	+.002 -.000	-.000	+	+.000 -.002	+.000	–	+.000 .001	+.001 -.000	+.005 -.000
204	.359	.005		.637	.625	.597		.375	.403		.622	.378	
205	.421	.005		.699	.687	.659		.437	.465		.684	.440	
206	.484	.005		.762	.750	.722		.500	.528		.747	.503	
207	.546	.007		.824	.812	.784		.562	.590		.809	.565	
208	.609	.009		.887	.875	.847		.625	.653		.872	.628	
209	.671	.009		.949	.937	.909		.687	.715		.934	.690	
210	.734	.010		1.012	1.000	.972		.750	.778		.997	.753	
211	.796	.010		1.074	1.062	1.034		.812	.840		1.059	.815	
212	.859	.010		1.137	1.125	1.097		.875	.903		1.122	.878	
213	.921	.010		1.199	1.187	1.159		.937	.965		1.184	.940	
214	.984	.010		1.262	1.250	1.222		1.000	1.028		1.247	1.003	
215	1.046	.010		1.324	1.312	1.284		1.062	1.090		1.309	1.065	
216	1.109	.012		1.387	1.375	1.347		1.125	1.153		1.372	1.128	
217	1.171	.012		1.449	1.437	1.409		1.187	1.215		1.434	1.190	
218	1.234	.012		1.512	1.500	1.472		1.250	1.278		1.497	1.253	
219	1.296	.012		1.574	1.562	1.534		1.312	1.340		1.559	1.315	
220	1.359	.012	.139	1.637	1.625	1.597	.002	1.375	1.403	.002	1.622	1.378	.187
221	1.421	.012	±.004	1.700	1.687	1.659		1.437	1.465		1.684	1.440	
222	1.484	.015		1.762	1.750	1.722		1.500	1.528		1.747	1.503	
223	1.609	.015		1.887	1.875	1.847		1.625	1.653		1.872	1.628	
224	1.734	.015		2.012	2.000	1.972		1.750	1.778		1.997	1.753	
225	1.859	.015		2.137	2.125	2.097		1.875	1.903		2.122	1.878	
226	1.984	.018		2.262	2.250	2.222		2.000	2.028		2.247	2.003	
227	2.109	.018		2.387	2.375	2.347		2.125	2.153		2.372	2.128	
228	2.234	.020		2.512	2.500	2.472		2.250	2.278		2.497	2.253	
229	2.359	.020		2.637	2.625	2.597		2.375	2.403		2.622	2.378	
230	2.484	.020		2.762	2.750	2.722		2.500	2.528		2.747	2.503	
231	2.609	.020		2.887	2.875	2.847		2.625	2.653		2.872	2.628	
232	2.734	.024		3.012	3.000	2.972		2.750	2.778		2.997	2.753	
233	2.859	.024		3.137	3.125	3.097		2.875	2.903		3.122	2.878	
234	2.984	.024		3.262	3.250	3.222		3.000	3.028		3.247	3.003	
235	3.109	.024		3.387	3.375	3.347		3.125	3.153		3.372	3.128	
236	3.234	.024		3.512	3.500	3.472		3.250	3.278		3.497	3.253	
237	3.359	.024		3.637	3.625	3.597		3.375	3.403		3.622	3.378	
238	3.484	.024		3.762	3.750	3.722		3.500	3.528		3.747	3.503	
239	3.609	.028		3.887	3.875	3.847		3.625	3.653		3.872	3.628	
240	3.734	.028		4.012	4.000	3.972		3.750	3.778		3.997	3.753	
241	3.859	.028		4.137	4.125	4.097		3.875	3.903		4.122	3.878	
242	3.984	.028		4.262	4.250	4.222		4.000	4.028		4.247	4.003	
243	4.109	.028		4.387	4.375	4.347		4.125	4.153		4.372	4.128	
244	4.234	.030		4.512	4.500	4.472		4.250	4.278		4.497	4.253	
245	4.359	.030		4.637	4.625	4.597		4.375	4.403		4.622	4.378	
246	4.484	.030		4.762	4.750	4.722		4.500	4.528		4.747	4.503	
247	4.609	.030		4.887	4.875	4.847		4.625	4.653		4.872	4.628	

† This groove width does not permit the use of Parbak rings. For pressures above 103.5 Bar (1500 psi), consult Design Chart 4-2 for groove widths where back-up rings must be used.

* These designs require considerable installation stretch. If assembly breakage is incurred, use a compound having higher elongation or use a two-piece piston.

Design Table 4-2: Gland Dimensions for Industrial O-Ring Static Seals, 103.5 Bar (1500 psi) Max.

Gland Dimensions for Industrial O-Ring Static Seals, 103.5 Bar (1500 psi) Max.† (Continued)

O-Ring Size Parker No. 2-	Dimensions ID	±	W	Mean OD (Ref)	A Bore Dia. (Male Gland) +.002 -.000	A-1 Groove Dia. (Female Gland) -.000	+	B Tube OD (Female Gland) +.000 -.002	B-1 Groove Dia. (Male Gland) +.000	–		C Plug Dia. (Male Gland) +.000 .001	D Throat Dia. (Female Gland) +.001 -.000	G† Groove Width +.005 -.000
248	4.734	.030		5.012	5.000	4.972		4.750	4.778			4.997	4.753	
249	4.859	.035		5.137	5.125	5.097		4.875	4.903			5.122	4.878	
250	4.984	.035		5.262	5.250	5.222		5.000	5.028			5.247	5.003	
251	5.109	.035		5.387	5.375	5.347		5.125	5.153			5.372	5.128	
252	5.234	.035		5.512	5.500	5.472		5.250	5.278			5.497	5.253	
253	5.359	.035		5.637	5.625	5.597		5.375	5.403			5.622	5.378	
254	5.484	.035		5.762	5.750	5.722		5.500	5.528			5.747	5.503	
255	5.609	.035		5.887	5.875	5.847		5.625	5.653			5.872	5.628	
256	5.734	.035		6.012	6.000	5.972		5.750	5.778			5.997	5.753	
257	5.859	.035		6.137	6.125	6.097		5.875	5.903			6.122	5.878	
258	5.984	.035		6.262	6.250	6.222		6.000	6.028			6.247	6.003	
259	6.234	.040		6.512	6.500	6.472		6.250	6.278			6.497	6.253	
260	6.484	.040		6.762	6.750	6.722		6.500	6.528			6.747	6.503	
261	6.734	.040		7.012	7.000	6.972		6.750	6.778			6.997	6.753	
262	6.984	.040		7.262	7.250	7.222		7.000	7.028			7.247	7.003	
263	7.234	.045		7.512	7.500	7.472		7.250	7.278			7.497	7.253	
264	7.484	.045		7.762	7.750	7.722		7.500	7.528			7.747	7.503	
265	7.734	.045	.139	8.012	8.000	7.972	.002	7.750	7.778	.002		7.997	7.753	.187
266	7.984	.045	±.004	8.262	8.250	8.222		8.000	8.028			8.247	8.003	
267	8.234	.050		8.512	8.500	8.472		8.250	8.278			8.497	8.253	
268	8.484	.050		8.762	8.750	8.722		8.500	8.528			8.747	8.503	
269	8.734	.050		9.012	9.000	8.972		8.750	8.778			8.997	8.753	
270	8.984	.050		9.262	9.250	9.222		9.000	9.028			9.247	9.003	
271	9.234	.055		9.512	9.500	9.472		9.250	9.278			9.497	9.253	
272	9.484	.055		9.762	9.750	9.722		9.500	9.528			9.747	9.503	
273	9.734	.055		10.012	10.000	9.972		9.750	9.778			9.997	9.753	
274	9.984	.055		10.262	10.250	10.222		10.000	10.028			10.247	10.003	
275	10.484	.055		10.762	10.750	10.722		10.500	10.528			10.747	10.503	
276	10.984	.065		11.262	11.250	11.222		11.000	11.028			11.247	11.003	
277	11.484	.065		11.762	11.750	11.722		11.500	11.528			11.747	11.503	
278	11.984	.065		12.262	12.250	12.222		12.000	12.028			12.247	12.003	
279	12.984	.065		13.262	13.250	13.222		13.000	13.028			13.247	13.003	
280	13.984	.065		14.262	14.250	14.222		14.000	14.028			14.247	14.003	
281	14.984	.065		15.262	15.250	15.222		15.000	15.028			15.247	15.003	
282	15.955	.075		16.233	16.250	16.222		16.000	16.028			16.247	16.003	
283	16.955	.080		17.233	17.250	17.222		17.000	17.028			17.247	17.003	
284	17.955	.085		18.233	18.250	18.222		18.000	18.028			18.247	18.003	
309	.412	.005		.832	.812	.777		.437	.472		*	.809	.440	
310	.475	.005	.210	.895	.875	.840		.500	.535		*	.872	.503	
311	.537	.007	±.005	.957	.937	.902	.004	.562	.597	.004	*	.934	.565	.281
312	.600	.009		1.020	1.000	.965		.625	.660			.997	.628	
313	.662	.009		1.082	1.062	1.027		.687	.722			1.059	.690	
314	.725	.010		1.145	1.125	1.090		.750	.785			1.122	.753	

† This groove width does not permit the use of Parbak rings. For pressures above 103.5 Bar (1500 psi), consult Design Chart 4-2 for groove widths where back-up rings must be used.

* These designs require considerable installation stretch. If assembly breakage is incurred, use a compound having higher elongation or use a two-piece piston.

Design Table 4-2: Gland Dimensions for Industrial O-Ring Static Seals, 103.5 Bar (1500 psi) Max.

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Gland Dimensions for Industrial O-Ring Static Seals, 103.5 Bar (1500 psi) Max.† (Continued)

O-Ring Size Parker No. 2-	Dimensions ID	±	W	Mean OD (Ref)	A Bore Dia. (Male Gland) +.002 -.000	A-1 Groove Dia. (Female Gland) -.000	+	B Tube OD (Female Gland) +.000 -.002	B-1 Groove Dia. (Male Gland) +.000	–	C Plug Dia. (Male Gland) +.000 .001	D Throat Dia. (Female Gland) +.001 -.000	G† Groove Width +.005 -.000
315	.787	.010		1.207	1.187	1.152		.812	.847		1.184	.815	
316	.850	.010		1.270	1.250	1.215		.875	.910		1.247	.878	
317	.912	.010		1.332	1.312	1.277		.937	.972		1.309	.940	
318	.975	.010		1.395	1.375	1.340		1.000	1.035		1.372	1.003	
319	1.037	.010		1.457	1.437	1.402		1.062	1.097		1.434	1.065	
320	1.100	.012		1.520	1.500	1.465		1.125	1.160		1.497	1.128	
321	1.162	.012		1.582	1.562	1.527		1.187	1.222		1.559	1.190	
322	1.225	.012		1.645	1.625	1.590		1.250	1.285		1.622	1.253	
323	1.287	.012		1.707	1.687	1.652		1.312	1.347		1.684	1.315	
324	1.350	.012		1.770	1.750	1.715		1.375	1.410		1.747	1.378	
325	1.475	.015		1.895	1.875	1.840		1.500	1.535		1.872	1.503	
326	1.600	.015		2.020	2.000	1.965		1.625	1.660		1.997	1.628	
327	1.725	.015		2.145	2.125	2.090		1.750	1.785		2.122	1.753	
328	1.850	.015		2.270	2.250	2.215		1.875	1.910		2.247	1.878	
329	1.975	.018		2.395	2.375	2.340		2.000	2.035		2.372	2.003	
330	2.100	.018		2.520	2.500	2.465		2.125	2.160		2.497	2.128	
331	2.225	.018		2.645	2.625	2.590		2.250	2.285		2.622	2.253	
332	2.350	.018		2.770	2.750	2.715		2.375	2.410		2.747	2.378	
333	2.475	.020		2.895	2.875	2.840		2.500	2.535		2.872	2.503	
334	2.600	.020		3.020	3.000	2.965		2.625	2.660		2.997	2.628	
335	2.725	.020		3.145	3.125	3.090		2.750	2.785		3.122	2.753	
336	2.850	.020	.210	3.270	3.250	3.215	.004	2.875	2.910	.004	3.247	2.878	.281
337	2.975	.024	±.005	3.395	3.375	3.340		3.000	3.035		3.372	3.003	
338	3.100	.024		3.520	3.500	3.465		3.125	3.160		3.497	3.128	
339	3.225	.024		3.645	3.625	3.590		3.250	3.285		3.622	3.253	
340	3.350	.024		3.770	3.750	3.715		3.375	3.410		3.747	3.378	
341	3.475	.024		3.895	3.875	3.840		3.500	3.535		3.872	3.502	
342	3.600	.028		4.020	4.000	3.965		3.625	3.660		3.997	3.628	
343	3.725	.028		4.145	4.125	4.090		3.750	3.785		4.122	3.753	
344	3.850	.028		4.270	4.250	4.215		3.875	3.910		4.247	3.878	
345	3.975	.028		4.395	4.375	4.340		4.000	4.035		4.372	4.003	
346	4.100	.028		4.520	4.500	4.465		4.125	4.160		4.497	4.128	
347	4.225	.030		4.645	4.625	4.590		4.250	4.285		4.622	4.253	
348	4.350	.030		4.770	4.750	4.717		4.375	4.410		4.747	4.378	
349	4.475	.030		4.895	4.875	4.840		4.500	4.535		4.872	4.503	
350	4.600	.030		5.020	5.000	4.965		4.625	4.660		4.997	4.628	
351	4.725	.030		5.145	5.125	5.090		4.750	4.785		5.122	4.753	
352	4.850	.030		5.270	5.250	5.215		4.875	4.910		5.247	4.878	
353	4.975	.037		5.395	5.375	5.340		5.000	5.035		5.372	5.003	
354	5.100	.037		5.520	5.500	5.465		5.125	5.160		5.497	5.128	
355	5.225	.037		5.645	5.625	5.590		5.250	5.285		5.622	5.253	
356	5.350	.037		5.770	5.750	5.715		5.375	5.410		5.747	5.378	
357	5.475	.037		5.895	5.875	5.840		5.500	5.535		5.872	5.503	
358	5.600	.037		6.020	6.000	5.965		5.625	5.660		5.997	5.628	

† This groove width does not permit the use of Parbak rings. For pressures above 103.5 Bar (1500 psi), consult Design Chart 4-2 for groove widths where back-up rings must be used.

* These designs require considerable installation stretch. If assembly breakage is incurred, use a compound having higher elongation or use a two-piece piston.

Design Table 4-2: Gland Dimensions for Industrial O-Ring Static Seals, 103.5 Bar (1500 psi) Max.

Gland Dimensions for Industrial O-Ring Static Seals, 103.5 Bar (1500 psi) Max.† (Continued)

O-Ring Size	Dimensions				A	A-1		B	B-1		C	D	G†
Parker No. 2-	ID	±	W	Mean OD (Ref)	Bore Dia. (Male Gland) +.002 -.000	Groove Dia. (Female Gland) -.000	+	Tube OD (Female Gland) +.000 -.002	Groove Dia. (Male Gland) +.000	–	Plug Dia. (Male Gland) +.000 .001	Throat Dia. (Female Gland) +.001 -.000	Groove Width +.005 -.000
359	5.725	.037		6.145	6.125	6.090		5.750	5.785		6.122	5.753	
360	5.850	.037		6.270	6.250	6.215		5.875	5.910		6.247	5.878	
361	5.975	.037		6.395	6.375	6.340		6.000	6.035		6.372	6.003	
362	6.225	.040		6.645	6.625	6.590		6.250	6.285		6.622	6.253	
363	6.475	.040		6.895	6.875	6.840		6.500	6.535		6.872	6.503	
364	6.725	.040		7.145	7.125	7.090		6.750	6.785		7.122	6.753	
365	6.975	.040		7.395	7.375	7.340		7.000	7.035		7.372	7.003	
366	7.225	.045		7.645	7.625	7.590		7.250	7.285		7.622	7.253	
367	7.475	.045		7.895	7.875	7.840		7.500	7.535		7.872	7.503	
368	7.725	.045		8.145	8.125	8.090		7.750	7.785		8.122	7.753	
369	7.975	.045		8.395	8.375	8.340		8.000	8.035		8.372	8.003	
370	8.225	.050		8.645	8.625	8.590		8.250	8.285		8.622	8.253	
371	8.475	.050		8.895	8.875	8.840		8.500	8.535		8.872	8.503	
372	8.725	.050		9.145	9.125	9.090		8.750	8.785		9.122	8.753	
373	8.975	.050		9.395	9.375	9.340		9.000	9.035		9.372	9.003	
374	9.225	.055		9.645	9.625	9.590		9.250	9.285		9.622	9.253	
375	9.475	.055		9.895	9.875	9.840		9.500	9.535		9.872	9.503	
376	9.725	.055		10.145	10.125	10.090		9.750	9.785		10.122	9.753	
377	9.975	.055	.210	10.395	10.375	10.340	.004	10.000	10.035	.004	10.372	10.003	.281
378	10.475	.060	±.005	10.895	10.875	10.840		10.500	10.535		10.872	10.503	
379	10.975	.060		11.395	11.375	11.340		11.000	11.035		11.372	11.003	
380	11.475	.065		11.895	11.875	11.840		11.500	11.535		11.872	11.503	
381	11.975	.065		12.395	12.375	12.340		12.000	12.035		12.372	12.003	
382	12.975	.065		13.395	13.375	13.340		13.000	13.035		13.372	13.003	
383	13.975	.070		14.395	14.375	14.340		14.000	14.035		14.372	14.003	
384	14.975	.070		15.395	15.375	15.340		15.000	15.035		15.372	15.003	
385	15.955	.075		16.375	16.375	16.340		16.000	16.035		16.372	16.003	
386	16.955	.080		17.375	17.375	17.340		17.000	17.035		17.372	17.003	
387	17.955	.085		18.375	18.375	18.340		18.000	18.035		18.372	18.003	
388	18.955	.090		19.373	19.375	19.340		19.000	19.035		19.372	19.003	
389	19.955	.095		20.373	20.375	20.340		20.000	20.035		20.372	20.003	
390	20.955	.095		21.373	21.375	21.340		21.000	21.035		21.372	21.003	
391	21.955	.100		22.373	22.375	22.340		22.000	22.035		22.372	22.003	
392	22.940	.105		23.360	23.375	23.340		23.000	23.035		23.372	23.003	
393	23.940	.110		24.360	24.375	24.340		24.000	24.035		24.372	24.003	
394	24.940	.115		25.360	25.375	25.340		25.000	25.035		25.372	25.003	
395	25.940	.120		26.360	26.375	26.340		26.000	26.035		26.372	26.003	
425	4.475	.033		5.025	5.000	4.952		4.500	4.548		4.996	4.504	
426	4.600	.033		5.150	5.125	5.077		4.625	4.673		5.121	4.629	
427	4.725	.033	.275	5.275	5.250	5.202	.004	4.750	4.798	.004	5.246	4.754	.375
428	4.850	.033	±.006	5.400	5.375	5.327		4.875	4.923		5.371	4.879	
429	4.975	.037		5.525	5.500	5.452		5.000	5.048		5.496	5.004	
430	5.100	.037		5.650	5.625	5.577		5.125	5.173		5.621	5.129	
431	5.225	.037		5.775	5.750	5.702		5.250	5.298		5.746	5.254	

† This groove width does not permit the use of Parbak rings. For pressures above 103.5 Bar (1500 psi), consult Design Chart 4-2 for groove widths where back-up rings must be used.

* These designs require considerable installation stretch. If assembly breakage is incurred, use a compound having higher elongation or use a two-piece piston.

Design Table 4-2: Gland Dimensions for Industrial O-Ring Static Seals, 103.5 Bar (1500 psi) Max.

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Gland Dimensions for Industrial O-Ring Static Seals, 103.5 Bar (1500 psi) Max.† (Continued)

O-Ring Size	Dimensions				A	A-1		B	B-1		C	D	G†
Parker No. 2-	ID	±	W	Mean OD (Ref)	Bore Dia. (Male Gland) +.002 -.000	Groove Dia. (Female Gland) -.000	+	Tube OD (Female Gland) +.000 -.002	Groove Dia. (Male Gland) +.000	–	Plug Dia. (Male Gland) +.000 .001	Throat Dia. (Female Gland) +.001 -.000	Groove Width +.005 -.000
432	5.350	.037		5.900	5.875	5.827		5.375	5.423		5.871	5.379	
433	5.475	.037		6.025	6.000	5.952		5.500	5.548		5.996	5.504	
434	5.600	.037		6.150	6.125	6.077		5.625	5.673		6.121	5.629	
435	5.725	.037		6.275	6.250	6.202		5.750	5.798		6.246	5.754	
436	5.850	.037		6.400	6.375	6.327		5.875	5.923		6.371	5.879	
437	5.975	.037		6.525	6.500	6.452		6.000	6.048		6.496	6.004	
438	6.225	.040		6.775	6.750	6.702		6.250	6.298		6.746	6.254	
439	6.475	.040		7.025	7.000	6.952		6.500	6.548		6.996	6.504	
440	6.725	.040		7.275	7.250	7.202		6.750	6.798		7.246	6.754	
441	6.975	.040		7.525	7.500	7.452		7.000	7.048		7.496	7.004	
442	7.225	.045		7.775	7.750	7.702		7.250	7.298		7.746	7.254	
443	7.475	.045		8.025	8.000	7.952		7.500	7.548		7.996	7.504	
444	7.725	.045		8.275	8.250	8.202		7.750	7.798		8.246	7.754	
445	7.975	.045		8.525	8.500	8.452		8.000	8.048		8.496	8.004	
446	8.475	.055		9.025	9.000	8.952		8.500	8.548		8.996	8.504	
447	8.975	.055		9.525	9.500	9.452		9.000	9.048		9.496	9.004	
448	9.475	.055		10.025	10.000	9.952		9.500	9.548		9.996	9.504	
449	9.975	.055		10.525	10.500	10.452		10.000	10.048		10.496	10.000	
450	10.475	.060		11.025	11.000	10.952		10.500	10.548		10.996	10.504	
451	10.975	.060		11.525	11.500	11.452		11.000	11.048		11.496	11.004	
452	11.475	.060		12.025	12.000	11.952		11.500	11.548		11.996	11.504	
453	11.975	.060		12.525	12.500	12.452		12.000	12.048		12.496	12.004	
454	12.475	.060	.275	13.025	13.000	12.952	.004	12.500	12.548	.004	12.996	12.504	.375
455	12.975	.060	±.006	13.525	13.500	13.452		13.000	13.048		13.496	13.004	
456	13.475	.070		14.025	14.000	13.952		13.500	13.548		13.996	13.504	
457	13.975	.070		14.525	14.500	14.452		14.000	14.048		14.496	14.004	
458	14.475	.070		15.025	15.000	14.952		14.500	14.548		14.996	14.504	
459	14.975	.070		15.525	15.500	15.452		15.000	15.048		15.496	15.004	
460	15.475	.070		16.025	16.000	15.952		15.500	15.548		15.996	15.504	
461	15.955	.075		16.505	16.500	16.452		16.000	16.048		16.496	16.004	
462	16.455	.075		17.005	17.000	16.952		16.500	16.548		16.996	16.504	
463	16.955	.080		17.505	17.500	17.452		17.000	17.048		17.496	17.004	
464	17.455	.085		18.005	18.000	17.952		17.500	17.548		17.996	17.504	
465	17.955	.085		18.505	18.500	18.452		18.000	18.048		18.496	18.004	
466	18.455	.085		19.005	19.000	18.952		18.500	18.548		18.996	18.504	
467	18.955	.090		19.505	19.500	19.452		19.000	19.048		19.496	19.004	
468	19.455	.090		20.005	20.000	19.952		19.500	19.548		19.996	19.504	
469	19.955	.095		20.505	20.500	20.452		20.000	20.048		20.496	20.004	
470	20.955	.095		21.505	21.500	21.452		21.000	21.048		21.496	21.004	
471	21.955	.100		22.505	22.500	22.452		22.000	22.048		22.496	22.004	
472	22.940	.105		23.490	23.500	23.452		23.000	23.048		23.496	23.004	
473	23.940	.110		24.490	24.500	24.452		24.000	24.048		24.496	24.004	
474	24.940	.115		25.490	25.500	25.452		25.000	25.048		25.496	25.004	
475	25.940	.120		26.490	26.500	26.452		26.000	26.048		26.496	26.004	

† This groove width does not permit the use of Parbak rings. For pressures above 103.5 Bar (1500 psi), consult Design Chart 4-2 for groove widths where back-up rings must be used.

* These designs require considerable installation stretch. If assembly breakage is incurred, use a compound having higher elongation or use a two-piece piston.

Design Table 4-2: Gland Dimensions for Industrial O-Ring Static Seals, 103.5 Bar (1500 psi) Max.